GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

UNSTARRED QUESTION NO:5634
ANSWERED ON:24.04.2001
EDIBLE CHOLERA VACCINE
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Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the Government laboratories have produced an `edible cholera vaccine` using transonic tomato;

(b) if so, the details thereof;

(c) whether the said vaccine came into the market without sufficient testing;

(d) if so, the facts in this regard and the cost of the vaccine;

(e) whether any efforts have been made to commercialise this discovery; and

(f) if so, the details thereof?

Answer

MINISTER OF STATE FOR SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT)

(a) & (b) : No edible cholera vaccine has been produced so far. However, a research project at Delhi University (South Campus) in collaboration with Centre for Biochemical Technology, Delhi; Institute of Microbial Technology, Chandigarh and National Institute of Immunology, New Delhi, is under implementation. The group has expressed non-pathogenic and immunogenic subunit of cholera toxin gene in several tomato plants. The immunogenicity studies have been conducted successfully. Transformation of tomato has been standardised and explants regenerated. Further experiments on parenteral and oral immunization are in progress. The administration of total protein by parental or oral route was found to induce antibodies in mice specific to cholera toxin B subunit.

(c) to (f) : No vaccine is brought into the market without propoer testing and approvals. Since experimental work is still under progress, therefore the cost of the final product and time schedule have not been finalized.